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Dkt. No. 60326/PJP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Carolyn E. Mountford et al.

Serial No. : 09/691,776 Group Art Unit: 3737

Filed : October 18, 2000 Examiner: Arlen Soderquist

For : MAGNETIC RESONANCE SPECTROSCOPY OF BREAST  
BIOPSY TO DETERMINE PATHOLOGY, VASCULARIZATION  
AND NODAL INVOLVEMENT

1185 Avenue of the Americas  
New York, New York 10036  
September 29, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**COMMUNICATION FORWARDING FORMAL DRAWINGS IN RESPONSE  
TO NOTICE OF ALLOWABILITY DATED JULY 1, 2004**

Applicants submit herewith three (3) sheets of formal drawings of Figures 1-3 directed to the above-identified application attached as Exhibit A. The enclosed formal drawings are submitted in response to Notice of Allowability dated July 1, 2004 (copy attached as Exhibit B). Accordingly, this Communication is timely filed.

No fee is deemed necessary in connection with the filing of this Communication. However, if any fee is necessary, authorization

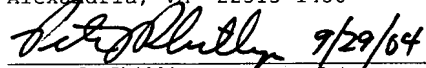
Applicants : Carolyn E. Mountford et al.  
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is hereby given to charge the amount of such fee to Deposit Account  
No. 03-3125.

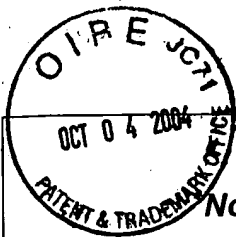
Respectfully submitted,

I hereby certify that this correspondence  
is being deposited this date with the  
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Peter J. Phillips Date  
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PJP

## Notice of Allowability

Application No.

09/691,776

Examiner

Arlen Soderquist

Applicant(s)

MOUNTFORD ET AL.

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the request for continued examination.

Issue Fee Due: 10/11/04

2. ☒ The allowed claim(s) is/are 1-26.

Drawings Due: 10/11/04 MPL

3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some\* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

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\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_

4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_

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1. The following is an examiner's statement of reasons for allowance: examiner is interpreting the arguments in the reply filed with the request for continued examination to mean that the leave one out method is not within the scope of the cross-validation set. In addition it is noted that step b) requires the separation of the entire set into two groups of about half of the spectra in each with the linear discriminant analysis being performed on a first of the two groups and the cross-validation of the result being performed on the second group. The leave one out method of the references does not teach this or fairly suggest the claimed cross validation method. Additionally, if the separation of the spectra by Somorjai into training and test groups and running the analysis on the training groups followed by testing the parameters on the test group can be considered a cross validation procedure, the claims are distinguished from the art based on the claims requiring the entire set of spectra to be divided into two groups with about half of the spectra in each. In Somorjai, multiple groupings of the 107 samples are made but Somorjai does not group the entire set into two groups but only uses subsets of the entire group. Additionally the subsets used by Somorjai are selections of different portions of the spectra based on the inclusion of specific samples known to have a particular type of disease state. This also does not teach or fairly suggest the claimed cross validation step in the method. Additionally the newly cited references teach the use of a bootstrap method to validate a method, but do not teach or fairly suggest the use of the linear discriminant analysis and the validation method as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art pertains to the bootstrap method of validation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose current telephone number is (571) 272-1265 as a result of the examiner moving to the new USPTO location. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

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A general phone number for the organization to which this application is assigned is (571) 272-1700. The fax phone number to file official papers for this application or proceeding is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



June 28, 2004

ARLEN SODERQUIST  
PRIMARY EXAMINER